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**FIPS PUB 29-3**

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**FEDERAL INFORMATION PROCESSING STANDARDS PUBLICATION**

**(Supersedes FIPS PUB 29-2 – 1987 September 14)**

**INTERPRETATION PROCEDURES FOR FEDERAL  
INFORMATION PROCESSING STANDARDS  
FOR SOFTWARE**

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## INTERPRETATION PROCEDURES FOR FEDERAL INFORMATION PROCESSING STANDARDS FOR SOFTWARE

Computer Systems Laboratory  
National Institute of Standards and Technology  
Gaithersburg, MD 20899

Issued October 29, 1992



**U.S. Department of Commerce**  
Barbara Hackman Franklin, Secretary  
  
Technology Administration  
Robert M. White, Under Secretary for Technology  
  
National Institute of Standards  
and Technology  
John W. Lyons, Director

### Foreword

The Federal Information Processing Standards Publication Series of the National Institute of Standards and Technology (NIST) is the official publication relating to standards and guidelines adopted and promulgated under the provisions of Section 111(d) of the Federal Property and Administrative Services Act of 1949 as amended by the Computer Security Act of 1987, Public Law 100-235. These mandates have given the Secretary of Commerce and NIST important responsibilities for improving the utilization and management of computer and related telecommunications systems in the Federal Government. The NIST, through its Computer Systems Laboratory, provides leadership, technical guidance, and coordination of Government efforts in the development of standards and guidelines in these areas.

Comments concerning Federal Information Processing Standards Publications are welcomed and should be addressed to the Director, Computer Systems Laboratory, National Institute of Standards and Technology, Gaithersburg, MD 20899.

James H. Burrows, Director  
Computer Systems Laboratory

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### Abstract

The purpose of this Federal Information Processing Standards Publication (FIPS PUB) is to establish the procedures for requesting a technical interpretation of the Federal Information Processing Standards (FIPS) for software and for providing a solution to the request. This FIPS PUB updates FIPS PUB 29-2 to reflect changes in legislative authority and other minor editorial changes. This FIPS PUB supersedes FIPS PUB 29-2 in its entirety.

Key words: BASIC; C; COBOL; CGM; DDF; Federal Information Processing Standard (FIPS); FORTRAN; GKS; IRDS; MUMPS; NDL; PASCAL; POSIX; SGML; software interpretation procedures; SQL; VHDL; X Window Systems.

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## Federal Information Processing Standards Publication 29-3

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### INTERPRETATION PROCEDURES FOR FEDERAL INFORMATION PROCESSING STANDARDS FOR SOFTWARE

Federal Information Processing Standards Publications (FIPS PUBS) are issued by the National Institute of Standards and Technology (NIST) after approval by the Secretary of Commerce pursuant to Section 111(d) of the Federal Property and Administrative Services Act of 1949 as amended by the Computer Security Act of 1987, Public Law 100-235.

**1. Purpose.** The purpose of this Federal Information Processing Standards Publication (FIPS PUB) is to establish the procedures for requesting a technical interpretation of the Federal Information Processing Standards (FIPS) for software and for providing a solution to the request. This FIPS PUB updates FIPS PUB 29-2 to reflect changes in legislative authority and other minor editorial changes. Technical interpretations are conducted under 15 U.S.C. 278-3(b)(1) and (3) which authorizes NIST: to assist the private sector, upon request, in using and applying the results of NIST programs and activities; and to provide technical assistance to Federal agencies in implementing standards. This FIPS PUB supersedes FIPS PUB 29-2 in its entirety.

**2. Background.** The FIPS for software include, but are not limited to, FIPS programming languages, FIPS database languages, FIPS graphics languages, and FIPS operating systems languages. As the standards are used as the basis for the implementation of software, validation of software, or writing of application programs, questions may arise as to the meaning of certain specifications. It is desirable to provide solutions to these questions that can be used uniformly throughout the Federal Government. In order to achieve this objective, the National Institute of Standards and Technology will provide responses to questions of technical interpretation for the respective FIPS. To assist NIST in providing these responses, a variety of mechanisms may be used, including:

- a. Obtaining a recommended interpretation from a committee of the recognized standards body responsible for the development of the standard that has been adopted as a FIPS.
- b. Organization of a Federal Interpretation Committee (FIC) which will be responsible for providing a recommended interpretation for a particular FIPS.
- c. Consultation with persons recognized as expert in the particular subject matter of the interpretation request.

**3. Dissemination of Technical Interpretations.** Director, National Institute of Standards and Technology; under authority of section 3 of Public Law 100-235.

**4. Maintenance Agency.** U.S. Department of Commerce, National Institute of Standards and Technology (Computer Systems Laboratory).

**5. Cross Index.<sup>1</sup>** The following is a current list of the FIPS for which the National Institute of Standards and Technology will issue technical interpretations. As new software standards are approved, they may be added to this list. Consult the appropriate FIPS PUB for the standard to which the technical interpretation request applies for any special instructions regarding interpretations.

- a. FIPS PUB 21, COBOL
- b. FIPS PUB 68, BASIC
- c. FIPS PUB 69, FORTRAN

<sup>1</sup> Refers to most recent revision of FIPS PUBS.

- d. FIPS PUB 109, PASCAL
- e. FIPS PUB 120, Graphical Kernel System
- f. FIPS PUB 123, Data Descriptive File for Information Interchange
- g. FIPS PUB 125, MUMPS
- h. FIPS PUB 126, Database Language NDL
- i. FIPS PUB 127, Database Language SQL
- j. FIPS PUB 128, Computer Graphics Metafile
- k. FIPS PUB 151, POSIX
- l. FIPS PUB 152, SGML
- m. FIPS PUB 153, PHIGS
- n. FIPS PUB 156, IRDS
- o. FIPS PUB 158, The User Interface Component of the Applications Portability Profile
- p. FIPS PUB 160, C
- q. FIPS PUB 172, VHDL
- r. FIPS PUB 177, IGES

**6. Implementing Schedule.** These procedures became effective on September 14, 1987.

**7. Applicability.**

a. The provisions of this document apply to Federal departments and agencies and to vendors of software that wish to have questions concerning specifications of FIPS for software resolved by the National Institute of Standards and Technology.

b. A technical interpretation that is developed and approved as a result of employing these procedures applies to software, as specified in each technical interpretation, that is brought into the Federal inventory after the effective date of the interpretation.

**8. Procedures.** (In the following procedure, each reference to "Federal Interpretation Committee" (FIC) should be construed to mean the specific interpretation committee responsible for the software to which the request applies.)

a. *Requesting a Technical Interpretation.*

- (1) Request may be submitted by a vendor of software intended to conform to a FIPS for software or by any department or agency of the Federal Government.
- (2) Request for a technical interpretation should be submitted in writing to the National Institute of Standards and Technology. See paragraph 9 for the address.
- (3) A request for technical interpretation should contain the following information:
  - (a) Name of organization submitting the request.
  - (b) Name of individual within the submitting organization who may be contacted concerning the request.
  - (c) Date by which the interpretation is desired.
  - (d) Appropriate references to FIPS specifications that have a bearing on the problem cited in the request.
  - (e) A concise explanation of the problem requiring a technical interpretation.
  - (f) Any supporting documentation that will assist in understanding or describing the problem.
  - (g) Any recommendations the requesting organization would like to make concerning a possible technical interpretation, along with appropriate justification or comments.

b. *Processing a Request for Technical Interpretation.*

- (1) Upon receipt, the National Institute of Standard and Technology will determine which of the following mechanisms will be used in developing a response to the request for technical interpretation:
  - (a) Obtaining a recommended interpretation from a committee of the recognized standards body responsible for the development of the standard that has been adopted as a FIPS.



- (b) Organization of a Federal Interpretation Committee (FIC) which will be responsible for providing a recommended interpretation for a particular FIPS.
    - (c) Consultation with persons recognized as expert in the particular subject matter of the interpretation request.
    - (d) Any combination of the mechanisms in (a) through (c) above. At least the mechanism in paragraph (a) above will be used in the case of a request for interpretation of a FIPS that adopts a standard developed by a recognized standards body.
  - (2) If the FIC is utilized:
    - (a) The request is distributed to the FIC.
    - (b) Position papers on proposed solutions to a cited problem may be submitted by any FIC member for consideration by the FIC membership.
    - (c) The requester of an interpretation may be invited to attend the meeting at which the request will be considered and to participate in the discussion of the problem identified by the request.
  - (3) If either the appropriate standards body or recognized experts is utilized, the request is sent to that body indicating the date by which a technical interpretation is desired.
  - (4) Upon completion of the proposed technical interpretation, the National Institute of Standards and Technology will:
    - (a) Arrange for publication of the proposed technical interpretation in the *Federal Register* and forward it to Federal agencies for the purpose of soliciting comments from Federal agencies, vendors, and private industry.
    - (b) Notify requester of the proposed technical interpretation.
  - (5) Comments received as a result of publication and review of the proposed technical interpretation will then be reviewed by the National Institute of Standards and Technology and, if appropriate, the body specified in paragraph 8.b.(1), and a final interpretation developed.
- c. *Dissemination of Technical Interpretations.*
- (1) The National Institute of Standards and Technology will be responsible for the dissemination of technical interpretation of FIPS for software.
  - (2) The final technical interpretation will consist of the following information:
    - (a) Definition of the problem being resolved.
    - (b) Discussion of the issues relevant to the problem.
    - (c) Discussion of the solution to the problem (interpretation).
    - (d) Any necessary clarification to the particular FIPS to effect the resolution (if needed).
    - (e) Effective date of the technical interpretation (if needed).
  - (3) The final interpretation will be disseminated as follows: Publication in the *Federal Register*; letter to the Federal agencies; letter to the requester; other dissemination as deemed appropriate.
  - (4) The National Institute of Standards and Technology will maintain a central register of technical interpretations for reference.

**9. Point of Contact.** The following address will be used for correspondence pertaining to technical interpretations of FIPS for software:

National Institute of Standards and Technology  
 Computer Systems Laboratory  
 Attn: Software Interpretations  
 Gaithersburg, MD 20899

**10. Where to Obtain Copies.** Copies of this publication are for sale by National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161. When ordering, refer to Federal Information Processing Standards Publication 29-3 (FIPSPUB29-3), and title. When microfiche is desired, this should be specified. Prices are published by NTIS in current catalogs and other issuances. Payment may be made by check, money order, deposit account.











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